

REMARKS**I. Introduction**

Applicants would like to thank the Examiner for the indication of allowable subject matter recited by claims 5, 11 and 12. In response to the Office Action dated April 21, 2004, Applicants have amended claims 1, 3-7, and 10-19 so as to further clarify the present invention. No new matter has been added.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

II. The Objections To the Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. The Examiner asserts that there is insufficient antecedent basis for the limitation “universal” as recited in claims 6, 16 and 17. However, it is respectfully submitted that the failure to provide explicit antecedent basis for terms does not always render a claim indefinite, and the mere fact that a term or phrase used in the claim has no antecedent basis in the specification disclosure also does not mean that the term or phrase is indefinite. If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite (**M.P.E.P. § 2173.05(e)**). Arguably, the claim would have been indefinite if it recited “the universal serial communication interface.” However, the foregoing claim language makes clear that the claim expressly identifies the “serial communication interface” as being a universal serial communication interface. As such, the claim is not indefinite, and therefore the claim does not lack antecedent basis in the manner

asserted by the Examiner. As such, it is respectfully submitted that the pending objection to the specification be withdrawn.

III. The Rejections Of the Claims Under 35 U.S.C. § 102

Claims 1, 6-9 and 13 are rejected under 35 U.S.C. § 102 as being anticipated by USP No. 6,311,042 B1 to DeSchrijver. Applicants respectfully traverse this rejection for at least the following reasons.

Claim 1 relates to a wireless display system composed of an image display device and a data processing device connected through wireless communication elements, comprising input and output data converting elements for converting data format and protocol in the wireless communication elements, and input and output processing virtual elements for making virtual data input and output process in the data processing device, wherein all data, including input data and output data, communicated between the image display device and data processing device are mutually transmitted and received through the input and output data converting elements and input and output processing virtual elements.

In accordance with one embodiment of the present invention, the data signals communicated between the image display device 106 and data processing device 101 are mutually transmitted and received through the input and output data converting elements 108 and input and output processing virtual elements 103.

Turning to the prior art, the pending rejection alleges that the wireless communication device 14 of DeSchrijver corresponds to the claimed image display device, while the pen input device 12 corresponds to the claimed data processing device. Specifically, DeSchrijver discloses that as the pen input device 12 moves across the writing

surface 24, the sensors 32 and 34 generate data signals representative of the dynamics of the pen motion which occurs while the pen input device is being employed for tracing an image, such as the signature 28 written on the surface 24. The data signals representative of the dynamics of the pen motions are then transmitted by the transmitter 18 to wireless communication device 14 (see, col. 4, lines 7-29). As such, DeSchrijver discloses a wireless communication device 14, and a pen input device 12 capable of collecting information about an image written on a writing surface and of transmitting that information into the wireless communication device.

However, nowhere does DeSchrijver disclose or suggest that the data signals of the traced image communicated between the wireless communication device 14 and the pen input device 12 are mutually transmitted and received. Indeed, the pen input device does not appear to have the capability for receiving data signals, since the pen input device 12 is utilized for tracing images, and transmitting such information about the image to the wireless communication device for display purposes.

Further, the pending rejection asserts that DeSchrijver discloses, in col. 4, lines 34-67, the alleged input and output data converting elements, and in col. 5, lines 55-59, the input and output processing virtual elements. However, it appears that the alleged input and output data converting elements and the alleged input and output processing virtual elements are drawn to the same processor 40 of the image display device 14, as readily shown in Fig. 2 and the foregoing portion of the specification of DeSchrijver, rather than input and output data converting elements provided at the wireless communication device, and input and output processing virtual elements provided at the pen input device.

In contrast, in accordance with the present invention, the input and output data converting elements 108 of the image display device 106 convert data and protocol in the wireless communication elements 105 and 108, while the input and output processing virtual elements 103 of the data processing device 101 process the virtual data input and output.

Thus, at a minimum, DeSchrijver fails to disclose or suggest input and output data converting elements for converting data format and protocol in said wireless communication elements, and input and output processing virtual elements for making virtual data input and output process in said data processing device, wherein all data, including input data and output data, communicated between the image display device and data processing device are mutually transmitted and received through the input and output data converting elements and input and output processing virtual elements, as recited by claim 1.

Further, with regard to claims 8 and 9, claim 8 recites a step of processing input and output in the data processing device virtually as if data input and output processing were done directly, wherein the foregoing step is done at the data processing device side, and all communication data between the image display device and data processing device is processed and mutually transmitted and received, while claim 9 recites a program of processing input and output in the data processing device virtually as if data input and output processing were done directly, wherein the foregoing program is executed at the data processing device side, and all communication data between the image display device and data processing device is transmitted and received.

Turning to the prior art and as discussed above, the Examiner alleges that the wireless communication device 14 of DeSchrijver corresponds to the claimed image display

device, while the pen input device 12 corresponds to the claimed data processing device. However, nowhere does DeSchrijver disclose or suggest that the data signals communicated between the wireless communication device 14 and the pen input device 12 are mutually transmitted and received. Indeed, the pen input device 12 is only capable of transmitting signals to and incapable of receiving signals from the wireless communication device 14.

Thus, at a minimum, DeSchrijver does not disclose or suggest that all communication data signals between the image display device and data processing device are processed and mutually transmitted and received, as recited by claim 8, or all communication data signals between the image display device and data processing device are transmitted and received, as recited by claim 9.

Furthermore, since the pen input device 12 does not have the capability of receiving and processing data signals transmitted from the wireless communication device 14, DeSchrijver also does not disclose or suggest processing input and output of the pen input device 12.

Thus, at a minimum, DeSchrijver also does not disclose or suggest processing input and output in the data processing device virtually as if data input and output processing were done directly, wherein the foregoing step is done at the data processing device side, as recited by claim 8, or processing input and output in the data processing device virtually as if data input and output processing were done directly, as recited by claim 9.

Further, with regard to claim 6, this claim recites that the input and output means is a universal serial communication interface. The Examiner asserts that the sensor inherently is a scanner to move a finely focused beam of light or electrons in a systematic pattern over a surface in order to reproduce or sense and subsequently transmit an image.

However, nowhere does DeSchrijver disclose or suggest that the alleged data input and output means (i.e. the receiver 20 and user screen 26) is universal in the manner asserted by the Examiner. Thus, at a minimum, DeSchrijver fails to disclose or suggest that the input and output means is a universal serial communication interface, as recited in claim 6.

With regard to claim 13, this claim recites that the data from the data input and output means is used for connection verification in wireless connection between the data processing device and image display device, or for user authentication in the data processing device.

However, nowhere does DeSchrijver disclose or suggest using the alleged data input and output means (i.e. the receiver 20 and user screen 26) for verifying connection between the pen input device 12 and wireless communication device 14, or for authenticating users in the pen input device 12. Thus, at a minimum, DeSchrijver does not disclose or suggest that the data from the data input and output means is used for connection verification in wireless connection between the data processing device and image display device, or for user authentication in the data processing device, as recited in claim 13.

As anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), and at a minimum, DeSchrijver fails to disclose the foregoing claim elements, for the foregoing reasons, it is clear that DeSchrijver does not anticipate claims 1 and 8-9 or any of the claims dependent thereon.

IV. **All Dependent Claims Are Allowable Because The Independent Claims From Which They Depend Are Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 8-9 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also in condition for allowance.

For all of the foregoing reasons, it is submitted that claims 2-7, 10-19 are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections of claims 1, 6-9 and 13 under 35 U.S.C. § 102, and claims 2-5, 10-12, and 14-19 under 35 U.S.C. § 103 be withdrawn.

Furthermore, with regard to claim 3, this claim recites a power saving control means which sets the image display device in second power saving mode for saving more power than in first power saving mode when the image display device is in first power saving mode.

The Examiner admits that the combination of DeSchrijver and Son does not disclose that the power saving control means sets the image display device in second power saving mode for saving more power than in first power saving mode when the image display device is in first powering saving mode, and the data input and output

means is not used for a specific time. Adachi is relied upon to cure these deficiencies.

However, nowhere does DeSchrijver, Son nor Adachi, taken alone or in combination, disclose or suggest a second power saving modes. Neither has the Examiner expressly addressed which alleged element of Adachi corresponds to the claimed second power saving mode (see, page 6-7 of the Office Action). Indeed, the combination of DeSchrijver, Son and Adachi does not even appear to disclose two power saving modes. As such, the combination of DeSchrijver, Son and Adachi does not disclose or suggest a second power saving mode, let alone suggest a second power mode for saving more power than the first power saving mode. Thus, at a minimum, the combination of DeSchrijver, Son and Adachi fails to disclose or suggest that the power saving control means sets the image display device in second power saving mode for saving more power than in first power saving mode when the image display device is in first powering saving mode.

V. **Conclusion**

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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